

[4910-13-P]

#### DEPARTMENT OF TRANSPORTATION

**Federal Aviation Administration** 

**14 CFR Part 39** 

[Docket No. FAA-2018-0275; Product Identifier 2018-NM-011-AD]

**RIN 2120-AA64** 

Airworthiness Directives; Bombardier, Inc., Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This proposed AD was prompted by reports indicating that corrosion was found on the main landing gear (MLG) retraction actuator brackets and their associated pins. This proposed AD would require an inspection of the retraction actuator brackets, their associated pins and hardware, and the mating lugs on the MLG outer cylinder for any corrosion, and replacement if necessary. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. **ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43

and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
  - Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West
  Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC
  20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m.,
  Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com; Internet http://www.bombardier.com. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0275; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office

(telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Dorie Resnik, Aerospace Engineer, Aviation Safety Section AIR-7B1, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7693.

#### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2018-0275; Product Identifier 2018-NM-011-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

## **Discussion**

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2017-34, dated October 19, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or

"the MCAI"), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The MCAI states:

There have been in-service reports of corrosion on the main landing gear (MLG) retraction actuator bracket and its associated pins. Bombardier's investigation determined that the corrosion is the consequence of inadequate corrosion protection being applied during production. Undetected corrosion on the MLG retraction actuator bracket and its associated pins could result in a MLG collapse.

This [Canadian] AD mandates the inspection of the MLG retraction actuator bracket, its associated pins and hardware, and the mating lugs on the MLG outer cylinder for corrosion. This [Canadian] AD also mandates the replacement of corroded MLG parts and the application of corrosion protection in order to mitigate the risk of MLG collapse.

You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0275.

# **Related Service Information under 1 CFR part 51**

Bombardier has issued Service Bulletin 670BA-32-060, Revision B, dated November 10, 2017. The service information describes a detailed visual inspection of the retraction actuator brackets, their associated pins and hardware, and the mating lugs on the MLG outer cylinder for any corrosion, and replacement if necessary. This service information is reasonably available because the interested parties have access to it

through their normal course of business or by the means identified in the ADDRESSES section.

# FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

## **Costs of Compliance**

We estimate that this proposed AD affects 541 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

**Estimated costs** 

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	16 work-hours X \$85 per hour = \$1,360	\$0	\$1,360	\$735,760

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements:

#### **On-condition costs**

Action	Labor cost	Parts cost	Cost per product
Replacement	1 work-hour X \$85 per hour = \$85	Up to 75,790	Up to \$75,875

## **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- 1. Is not a "significant regulatory action" under Executive Order 12866;
- 2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
  - 3. Will not affect intrastate aviation in Alaska; and
- 4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

## § 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Bombardier, Inc.: Docket No. FAA-2018-0275; Product Identifier 2018-NM-011-AD.

### (a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

## (b) Affected ADs

None.

# (c) Applicability

This AD applies to Bombardier, Inc., Model airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

- (1) Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10002 and subsequent.
- (2) Model CL-600-2D15 (Regional Jet Series 705) airplanes and ModelCL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 and subsequent.
- (3) Model CL-600-2E25 (Regional Jet Series 1000) airplanes, serial numbers 19001 and subsequent.

## (d) Subject

Air Transport Association (ATA) of America Code 32, Landing gear.

## (e) Reason

This AD was prompted by reports indicating that corrosion was found on the main landing gear (MLG) retraction actuator brackets and their associated pins. We are issuing this AD to address undetected corrosion on the MLG retraction actuator brackets and their associated pins, which could lead to a MLG collapse.

## (f) Compliance

Comply with this AD within the compliance times specified, unless already done.

# (g) Inspection and Replacement

For any MLG dressed shock strut assembly with part numbers and serial numbers specified in paragraph 1.A., "Effectivity," of Bombardier Service Bulletin 670BA-32-060, Revision B, dated November 10, 2017, at the applicable compliance times specified in paragraphs (g)(1), (g)(2), or (g)(3) of this AD, do a detailed visual inspection of the retraction actuator brackets, their associated pins and hardware, and the mating lugs on the MLG outer cylinder for any corrosion, and do all applicable replacements, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 670BA-32-060, Revision B, dated November 10, 2017. Do all applicable replacements before further flight.

- (1) For any MLG dressed shock strut assembly that has accumulated less than 10,000 total flight hours on the MLG dressed shock strut assembly and has been in service for less than 60 months since its first installation on an airplane: Within 6,600 flight hours or 39 months, whichever occurs first, after the effective date of this AD.
- (2) For any MLG dressed shock strut assembly that has accumulated less than or equal to 14,000 total flight hours on the MLG dressed shock strut assembly, and has been in service for less than 84 months since its first installation on an airplane, and does not meet the criteria in paragraph (g)(1) of this AD: Within 4,400 flight hours or 26 months, whichever occurs first, after the effective date of this AD, but not to exceed 16,600 total

flight hours on the MLG dressed shock strut assembly or 99 months since its first installation on an airplane, whichever occurs first.

(3) For any MLG dressed shock strut assembly that has accumulated more than 14,000 total flight hours on the MLG dressed shock strut assembly or 84 months or more since its first installation on an airplane: Within 2,600 flight hours or 15 months, whichever occurs first, after the effective date of this AD.

## (h) Parts Exempted from this AD

For any MLG dressed shock strut assembly with part numbers and serial numbers specified in paragraph 1.A., "Effectivity," of Bombardier Service Bulletin 670BA-32-060, Revision B, dated November 10, 2017: The actions specified in paragraph (g) of this AD are not required provided that the actions in paragraphs (h)(1), (h)(2), or (h)(3) of this AD have been done.

- (1) The actions in paragraphs (h)(1)(i), (h)(1)(ii), (h)(1)(iii), and (h)(1)(iv) of this AD, as applicable, have been done on the MLG dressed shock strut assembly since its entry-into-service date.
- (i) Airplane maintenance manual (AMM) Task 32-32-05-400-803, Installation of the Outboard MLG Retraction Actuator Bracket Pin, or equivalent task in component maintenance manual (CMM) 32-11-05 (for Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes), or CMM 32-11-06 (for Model CL-600-2D15 (Regional Jet Series 705) airplanes and Model CL-600-2D24 (Regional Jet Series 900) airplanes), or CMM 32-11-34 (for Model CL-600-2E25 (Regional Jet Series 1000) airplanes); and

- (ii) AMM Task 32-32-05-400-804, Installation of the Inboard MLG Retraction-Actuator Bracket Pin, or equivalent task in CMM 32-11-05 (for Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes), or CMM 32-11-06 (for Model CL-600-2D15 (Regional Jet Series 705) airplanes and Model CL-600-2D24 (Regional Jet Series 900) airplanes), or CMM 32-11-34 (for Model CL-600-2E25 (Regional Jet Series 1000) airplanes); and
- (iii) AMM Task 32-32-05-400-805, Installation of the Inboard-MLG Retraction-Actuator Pin, or AMM Task 32-32-05-400-801, Installation of the MLG Retraction-Actuator, or AMM Task 32-11-05-400-801, Installation of the MLG Shock-Strut Assembly; and
- (iv) For Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes equipped with MLG auxiliary actuators: AMM Task 32-32-03-400-801, Installation of the MLG Auxiliary Actuator, or AMM Task 32-11-05-400-801, Installation of the MLG Shock-Strut Assembly.
- (2) AMM Task 32-32-05-400-806, Installation of the MLG Retraction-Actuator Bracket has been accomplished on the MLG dressed shock strut assembly since its entry-into-service date.
- (3) AMM-Tasks 32-11-00-610-801 Restoration (Overhaul) of the MLG Assembly has been accomplished since its entry into service date.

### (i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 670BA-32-060, dated May 2, 2017, or Bombardier Service Bulletin 670BA-32-060, Revision A, dated June 22, 2017.

## (j) Other FAA AD Provisions

The following provisions also apply to this AD:

- (1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.
- (2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

# (k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2017-34, dated October 19, 2017, for related information. This MCAI may be found in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2018-0275.

(2) For more information about this AD, contact Dorie Resnik, Aerospace

Engineer, Aviation Safety Section AIR-7B1, Boston ACO Branch, FAA, 1200 District

Avenue, Burlington, MA 01803; telephone 781-238-7693.

(3) For information about AMOCs, contact Aziz Ahmed, Aerospace Engineer,

Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart

Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

(4) For service information identified in this AD, contact Bombardier, Inc., 400

Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer

Response Center North America toll-free telephone 1-866-538-1247 or direct-dial

telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com;

Internet http://www.bombardier.com. You may view this service information at the FAA,

Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on

the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on March 29, 2018.

Chris Spangenberg,

Acting Director,

System Oversight Division,

Aircraft Certification Service.

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